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# Combat Crew

strategic air command

★ ★ ★ ★ MAY 1983

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# THE PROFESSION OF ARMS

They call it "The Profession of Arms" — this business we are in. Have you ever wondered what that really means, or how you fit in? Do those of us who wear the uniform of our country incur any special trust or obligation because we are in **The Profession of Arms?**

Maybe we should start out by trying to define our terms. **Professions,** according to the dictionary has as one definition, "*. . .an occupation, esp. one requiring extensive education . . .*" Part of the definition of **Professional** includes such phrases as "*. . . engaged in one of the learned professions . . .*" and "*. . . a person who belongs to one of the professions . . .*" As far as I'm concerned the dictionary hasn't been much help.

At the very basic level, the definitions above may suffice. In SAC, though, these descriptions appear to be too shallow. It seems to me what is clearly lacking from the definition of **Professional** is any mention of one's attitude. We can work at our job without being professional, but those extra special feelings of pride, commitment and confidence seem to set apart the Professional from the worker. Professionalism is not bounded by the kinds of duties we are assigned or the military grade we wear. Professional performers stand out everywhere just because they've got their act together.

During our IG outbriefs, for example, one of the genuine highlights is always the public acknowledgment of the Professional Performers. The recognition of those young men and women (for brevity reasons we limit the list to Sergeant and below) for the special jobs they do, sets them apart as professionals and a credit to their organizations. Naturally, technical knowledge, adaptability, leadership qualities, etc., are important, but the distinguishing feature between superiority and mediocrity is a positive attitude. It's when one exhibits that special spark that says, "I like my job, I'm one of the best in my field, and I'm an important part of this organization."

**The Professional does not:**

1. Cut corners, or find the expedient way to do the job in a half-hearted manner.
2. Let things slide until problems get out of hand.
3. Slack off so that fellow workers have to pick up an unfair share of the load.
4. Willfully ignore technical data procedures and requirements.
5. Fail to do the best in all tasks, for that may be the weakest link in the mission chain.

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Brigadier General Jack K. Farris, Inspector General

**The Professional does:**

1. Willingly undertake the tough jobs.
2. Seek excellence in all endeavors.
3. Find great satisfaction and pride in doing a job well.
4. Exhibit uncompromising trustworthiness.
5. Stand responsible and accountable for his/her actions.
6. Exhibit a long term dedication and commitment to serve the goals of that profession.

At times we are all tempted by the easier way out; and maybe we have even succumbed at some time and have come away from that experience unscathed. In the long haul, though, a maintenance or operations error with a weapon system can be terribly unforgiving of oversight, ignorance or neglect. The professional should not find himself or herself in that compromising position.

In the final analysis, there is no doubt about the true professionals — they are easy to spot. How often have you heard someone referred to as "a real pro"? That is a mark of distinction that is earned. In one of the most professional commands in the U.S. Air Force, the title of **"a real pro"** or **"Professional Performer"** really means something special. ★

Combat Crew

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## ON OUR COVER

SAC's famed B-52, a most vital element of the nation's defense. For a look at B-52 fuel conservation, see page 12.

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# AIRCRAFT ACCIDENTS *RELATED TO WEATHER*

Capt Tom Kuehn
416 BMW, Griffis AFB

Despite advances in aircraft and control technology, weather is a critical factor in about 40% of fatal general aviation accidents and more than 50% of air carrier accidents. Probably the most volatile weather condition which poses serious hazards to aviation on a regular basis is the thunderstorm. At high altitude its effects include severe turbulence and hail, at middle altitudes heavy rain joins the list and down at transition altitudes, all are further complicated by wind shear.

SAC military aircraft are restricted in their operations in the vicinity of thunderstorms by at least 10 nm below FL 230 and by 20 nm at or above FL 230. Civilian operators have no clear-cut FAR restrictions, only those imposed by the parent company's philosophy of safety.

On July 9, 1982, a Pan American B-727 crashed shortly after takeoff from New Orleans International Airport, resulting in 153 fatalities. Although no final NTSB report has been issued as I write this, board officials have been concentrating on wind shear in the investigation. This emphasis is based on the existing weather at the airport at the time of the crash, eyewitness accounts and the similarity of the performance profile of the Pan Am aircraft to that of previous crashes attributed to wind shear (most specifically, the Continental B-727 crash at Denver, August 7, 1975).

At the time of the Continental accident, a thunderstorm was moving over the northern portion of the Denver airport. The aircraft took off to the north and encountered a wind shear at 100 feet. The aircraft first hit the ground 387 feet short of the departure end of the 11,500-foot runway and came to rest 1600 feet beyond the end of the runway. There were no fatalities.

In this accident, the safety board determined that "the probable cause was the aircraft's encounter, immediately following takeoff, with severe wind shear at an altitude and airspeed that precluded recovery to level flight, and that the wind shear caused the aircraft to descend at a rate that could not be overcome even though the aircraft was flown at or near its maximum lift capability throughout the encounter. The wind shear was generated by the outflow from a thunderstorm that was over the aircraft's departure path."

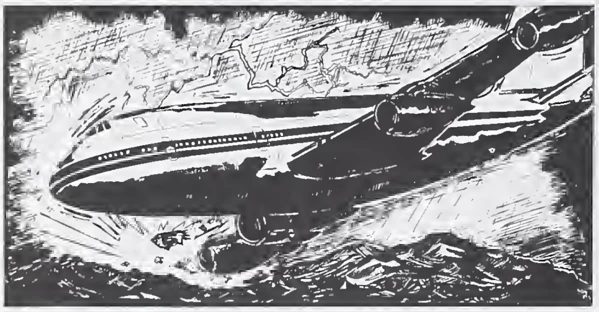
On the afternoon of the Pan Am crash, the weather was reported to be 4100 overcast with two miles visibility in heavy rain showers. I would suspect an intermittent condition of lower visibility with heavy rain, but it wasn't addressed in research material. The wind was reported at 060/15G25. Cumulonimbus clouds were reported above the airport with thunderstorms east and west. Runway 10 was the runway in use. During taxi out, two wind shear alerts were given over ground control frequency and one on the tower frequency. New Orleans International is one of the airports which has a low level wind shear (LLWS) detection system installed. Basically, the alert system would activate when one of the sensors mounted in the four quadrants registers a wind velocity of 15 knots difference from the sensor located near the center of the airport. The northeast quadrant reported a wind at 330/10 and the northwest reported 130/03. One minute later, ground control reported LLWS in all quadrants and that it appeared frontal passage was overhead at that time. Pan Am started its takeoff roll, was airborne less than 30 seconds later and crashed approximately 3800 feet beyond the end of the runway.

Experienced investigators believe that the thunderstorm related wind shear will be found as a probable cause. The severity of the wind shear may be associated with "micro burst," which is a highly localized downdraft and rapid horizontal spreading of wind at the surface. Such a wind shear is expected to occur over several hours and on a scale of miles during summer in association with major thunderstorms.

The Pan Am crew took off with maximum takeoff thrust. The wind shear appears to have caused sufficient loss of lift resulting in impact with the ground soon after takeoff. As SAC aircrews, to avoid a like circumstance, we need only to adhere to SAC flying directives mentioned earlier and we'll probably stay out of serious difficulty. For general aviation and air carriers, keen awareness of the location of thunderstorms and a healthy understanding of their effects on aircraft performance may prevent a mishap.

In another thunderstorm related accident, a Southern Airways DC-9 was the victim of a thunderstorm and its associated hail on April 4, 1977. Southern's route of flight was a continuation from Muscle Shoals, Alabama, with a stop at Huntsville, Alabama, and then on to Atlanta, Georgia. Prior to departure from Muscle Shoals, the flight crew received a weather briefing from Southern dispatch which included information on a rampaging squall line that involved parts of Georgia. Numerous teletype messages warned of thunderstorms along their route of flight with thunder and lightning already in progress at Huntsville. Also, a tornado watch had been issued by the severe storms forecast center in Kansas City to include northeast Alabama and northern Georgia, warning of the possibility of tornadoes and severe thunderstorms with large hail and damaging winds. From 1400 to 1800 hours, the watch area included a 140 nm stretch across the Southern flight path. In this time period, no less than seven tornadoes were reported.

As the Southern flight approached Huntsville they were advised by ATC of the area of bad weather near Atlanta. During the Huntsville stopover, there is no record of a weather update by the flight crew. Coincidentally with this stop, a valid SIGMET was issued warning of thunderstorms with tops above 40,000 feet in a line running through Georgia, some of them severe, with possible tornadoes. From Miami came a National Weather Service warning specifically for Atlanta, where severe thunderstorms were developing which contained hail and strong wind gusts. A United flight between Muscle Shoals and



Huntsville reversed course to the west to seek an alternate landing site, however, the Southern flight took off for Atlanta at 1552.

Two minutes after takeoff, Atlanta center began weather advisories and radar vectors for buildups. Another SIGMET was broadcast warning of hazardous weather. Soon after level off at 17,000 feet, the aircraft reported "blowing up a bit," presumably for turbulence. The flight was cleared to descend to 14,000 feet, but the onboard flight recorder showed an increase in altitude to 18,300 feet 14 seconds later. This violent change in altitude indicated that Southern had flown into a thunderstorm cell. Soon after this, the crew reported that their one and one-half inch thick windshield had been "busted." Within minutes of this occurrence, they reported the loss of one engine, then the loss of the second one. For those unfamiliar with the DC-9, it only has two engines.

The crew knew that making the Atlanta airport was out of the question and asked center for an alternate field. They were given Dobbins AFB. Twenty miles from Dobbins at 5800 feet, they were descending at 200 knots and 1400 fpm. It soon became evident they would not make Dobbins. They were initially told there was nothing closer, but then center realized Cartersville airport was only 10 nm away. However, before they could set up, they were out of altitude and had to attempt a landing on a highway; 62 passengers and crew plus nine people on the ground perished.

Probable cause? The NTSB investigation found that "the total and unique loss of thrust from both engines while the aircraft was penetrating an area of severe thunderstorms" was the primary cause of the crash. The board adopted the results with one dissenting member, who felt that more emphasis should have been placed on the fact that the pilot still flew into the storm knowing what he did about it. There was clear-cut evidence of severe weather. Don't fly into thunderstorms or areas under the immediate effects of them or conditions of reported severe weather.

Another weather phenomena to be avoided is the effects of icing associated with winter operations. Icing has a detrimental effect on aircraft performance, i.e., it changes the airflow over the wing which affects stall speed and also adds drag. Icing also hurts the efficiency of jet engines and could eventually cause engine damage and failure.

On January 13, 1982 an Air Florida B-737 crashed soon after takeoff from Washington National Airport into the 14th Street Bridge, killing 74 of 79 people on board and four on the bridge. The plane took off after a one hour and forty-five minute delay due to a moderate to heavy snowfall which caused the temporary closing of the airport. At the time of the takeoff, wet snow was falling and visibility was low enough to preclude tower personnel from observing the active runway.

The NTSB investigation of this accident determined that the probable cause was flight crew failure to use engine anti-ice during ground operations and takeoff; the decision to take off with snow and ice on airfoil surfaces and the captain's failure to reject (abort) the takeoff during the early stages when his attention was called to anomalous engine instrument readings. To further clarify, the lack of engine anti-icing caused by PT2 probe to ice over and provide erroneous EPR readings (2.04 was required and it was indicated on the gauge but the actual EPR the engines produced was 1.70, about 3,750 pounds of thrust less per engine than necessary for takeoff). The captain did not insure ice and snow was removed from the aircraft surfaces prior to pushback and the glycol solution used for deicing the wings was of insufficient strength. The first officer questioned the vertical position of the throttles and stated something wasn't right. The captain assured him that things were normal and elected to continue the takeoff.

Contributing causes cited by the board were: a prolonged ground delay between deicing and the receipt of an ATC takeoff clearance during which the airplane was exposed to continual precipitation, the known inherent pitch up characteristics of the B-737 when the leading edge flaps are contaminated with even small amounts of snow or ice, and the limited experience of the crew in jet transport winter operations.

Another fatal accident associated with icing involved a Northwest Orient B-727 charter which left JFK International in New York for the Buffalo airport on December 1, 1974. The flight had crewmembers only on board, as they were going to pick up the Baltimore Colts after their game.

Prior to their departure, the crew received a weather briefing which showed heavy snow from Lake Michigan to the Appalachians and moderate to heavy rain showers and scattered thunderstorms east of the Appalachians. There was a prediction of moderate icing in clouds; locally severe in precipitation above the freezing level. Northwest's turbulence plot showed thunderstorms up to FL 280 in a triangle formed by Pittsburgh, New York City and Richmond, Virginia. The Northwest flight path should take them north of the area.

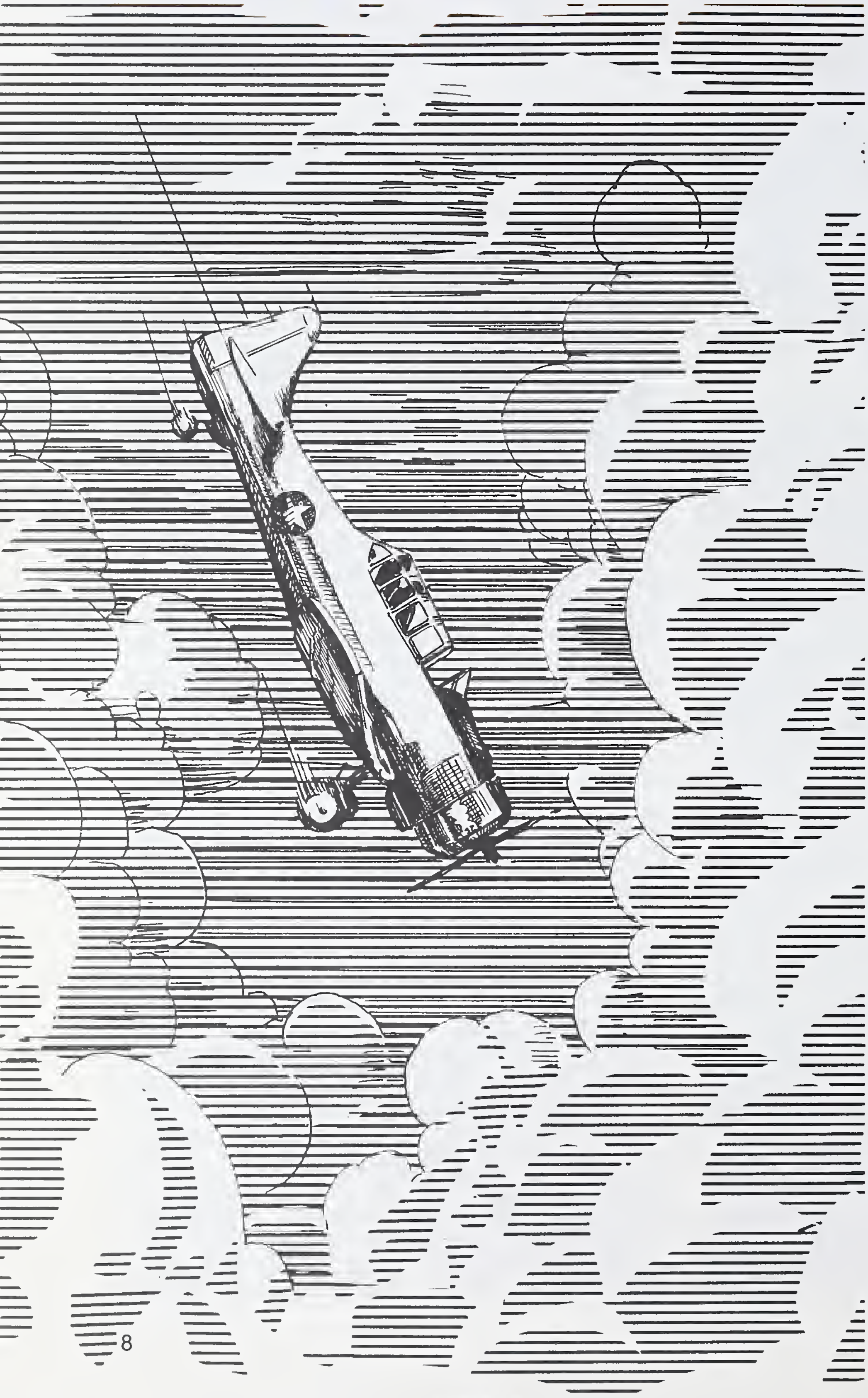
The flight and voice recorders disclosed the following flight profile: After takeoff the aircraft leveled off at 13,500 feet for approximately 50 seconds due to an ATC restriction. The airspeed increased from 264 to 304 knots. The aircraft then began a 2500 fpm climb, maintaining 305 knots. As the altitude increased above 16,000 feet, the "recorded" airspeed began to increase and soon after, the first officer commented, "Do you realize we're going 340 knots and I'm climbing at 5000 fpm?" The crew discussed the implications of the high airspeed and high rate of climb. The second officer said, "That's because we're light." The captain then said, "It sets up real fast; I wish I had my shoulder harness on, it's going to give up pretty soon."

Commercial operators who fall under the FAR's are required to have their shoulder harness on only for takeoff and landing, so it's the exception when the pilots don't release their shoulder harness soon after takeoff. The rate of climb increased to 6500 fpm. As they reached FL 230, the overspeed warning sounded. The captain said, "Would you believe that?" To which the first officer replied, "I believe it; I just can't do anything about it." The captain said, "No, just pull her back; let her climb." This last statement was followed by a second overspeed warning horn.

Ten seconds later the stall warning stick shaker began to activate and the aircraft was leveled at FL 248. The stall warning began again and the first officer said, "There's that Mach buffet; guess we'll have to pull it up." The captain said, "Pull it up." (The pilots were mistaking this event as exceeding the critical Mach, where the shock wave on the wing surface and airflow separation aft of the shock wave occurs due to the change from smooth to turbulent flow across the wing. This causes a high frequency vibration in the control surfaces which is often described as buffet or buzz. In this case, the aircraft must be slowed down.) A few seconds after the "Pull up" command, the aircraft began to fall and turn rapidly to the right, an indication of a spin. As the descent continued and the airspeed increased, a "May Day" was transmitted. Thirty-three seconds later, the crew reported "We're descending through 12, we're in a stall." It took 83 seconds for the aircraft to fall from 24,800 feet to the surface. The rate of de-

*Cont. on page 18*

# THE APATHY FACTOR



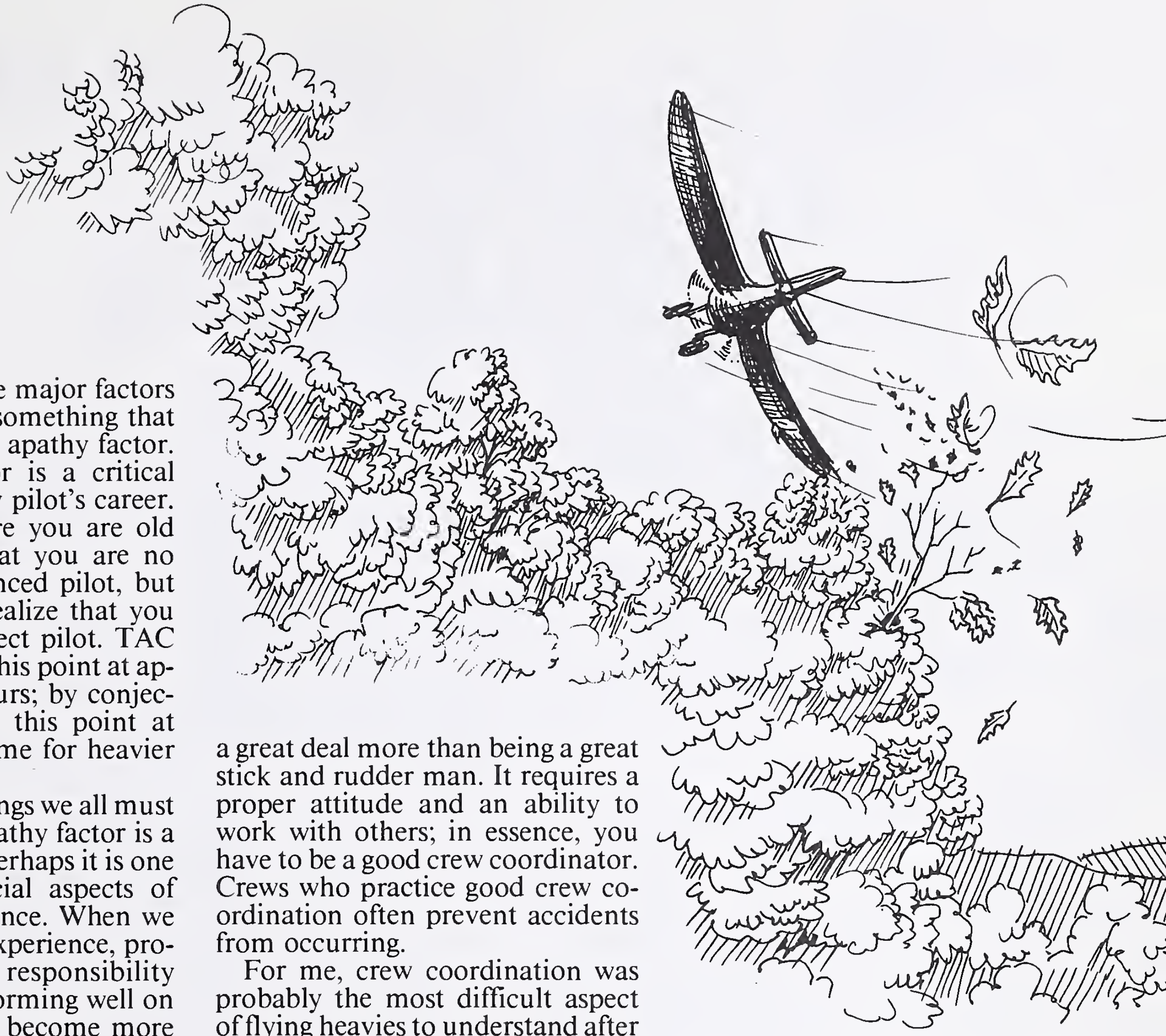
**Capt Peter H. Liotta**
**5BMS, Minot AFB**

When my father was a young T-6 IP, there was a different philosophy about flying and flying safety. As an example, in those days crew rest was a rather hazy concept. My father would fly cross-country on weekends to New York to visit my mother, and then return to base and crawl in the parachute rack for a few hours sleep before walking out to his airplane with his student for an early Monday morning mission.

My father once had a standing wager with another IP that he could get the T-6 in an inverted spin and safely recover. One day, after weeks of unsuccessful attempts, the aircraft finally snapped over on its back and plummeted to earth as fast as structurally possible. The moment the aircraft entered the spin, my father's seat belt simultaneously released.

Plastered against the canopy, and unable to reach the flight controls, he ordered the student to bail out. The student, however, wasn't going anywhere without his IP. Somehow, my father grabbed the canopy railing and pulled himself back into the seat. Then, as he puts it, *"I stepped on a rudder pedal — I don't know which one."* Fortunately, for him (and for me, or else I wouldn't be writing this), he stepped on the right rudder and pulled the aircraft out. He tells me he remembers looking up at the tree tops when he finally recovered from the maneuver.

One of the tricks of the trade in those days was learning to fly and stay alive. Despite his fool-hardiness, my father fortunately learned from his mistakes. Not all of his classmates, however, were so lucky. Within three years of his graduation from pilot training, half of his classmates were dead as the result of aircraft mishaps.



Perhaps one of the major factors in their deaths was something that still exists today: the apathy factor.

The apathy factor is a critical stage in nearly every pilot's career. It is the point where you are old enough to know that you are no longer an inexperienced pilot, but still too young to realize that you will never be a perfect pilot. TAC studies have placed this point at approximately 700 hours; by conjecture, I would place this point at 1500 hours flying time for heavier type aircraft.

One of the first things we all must realize is that the apathy factor is a very real presence. Perhaps it is one of the least beneficial aspects of building self-confidence. When we are building flying experience, progressing rapidly in responsibility and status, and performing well on evaluations, we also become more and more convinced that we can do no wrong.

When an inflight situation occurs, often we can resolve problems quickly and without the need to generate much excitement. When a serious emergency pops up, however, it requires every ounce of knowledge, experience, and skill that we have. False confidence in our abilities and complacency with the knowledge that we can cope with anything that may arise serves only to compound the problems of any situation.

As our experience level increases, attention to detail should become progressively more important. Developing personal discipline is not easy. It requires the integrity to constantly improve attitudes, knowledge of command directives and technical aspects of flying, working with other crewmembers, as well as improving your own knowledge and ability in flying.

Being an effective pilot requires a great deal more than being a great stick and rudder man. It requires a proper attitude and an ability to work with others; in essence, you have to be a good crew coordinator. Crews who practice good crew coordination often prevent accidents from occurring.

For me, crew coordination was probably the most difficult aspect of flying heavies to understand after graduating from UPT. Coming from an environment where I was expected to act and decide autonomously, crew coordination was something totally new. It helps, however, in preventing the apathy factor's effects.

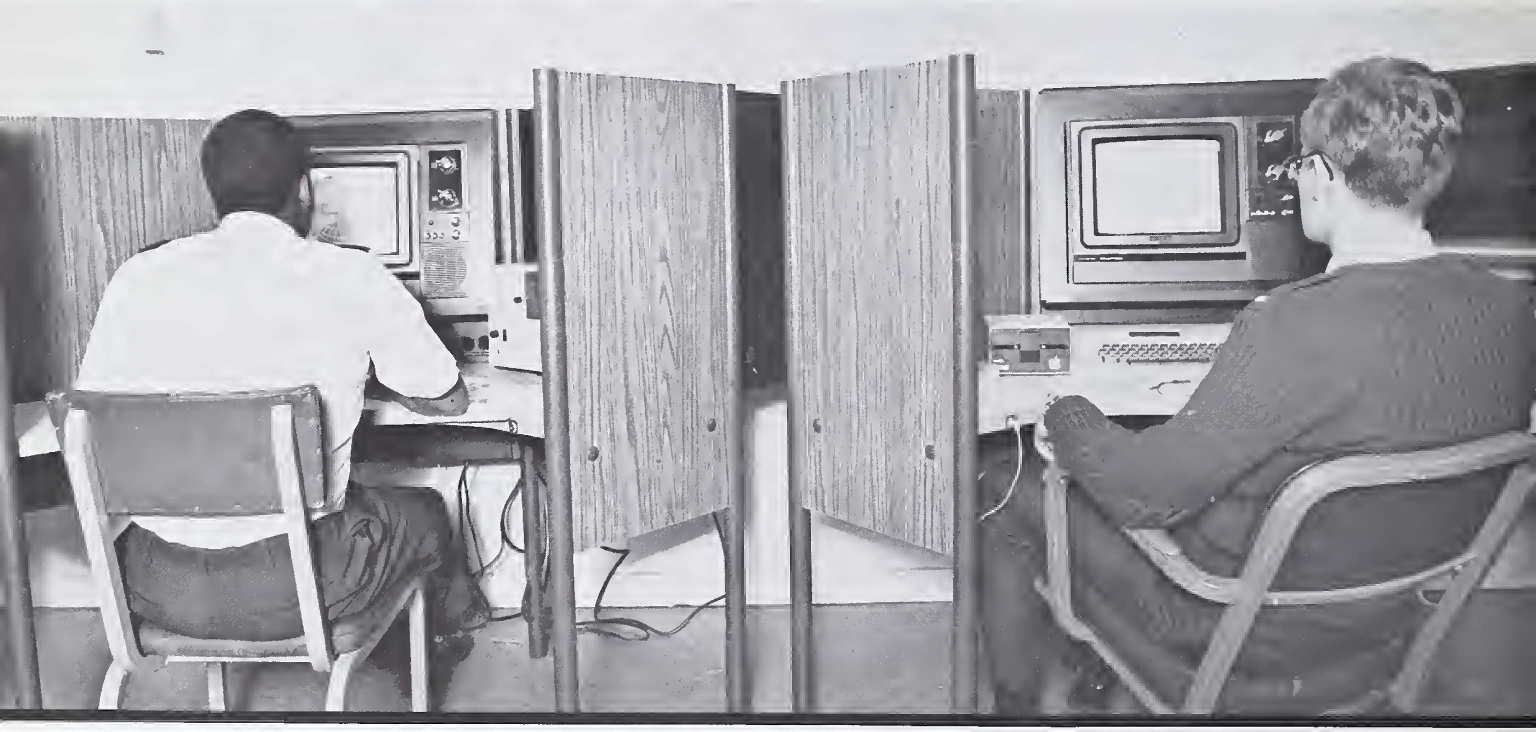
A strong copilot, for example, is able to monitor and back up the crew during all phases of flight. A strong copilot doesn't walk away from a shaky approach and landing that he allowed to develop, saying, *"Hell, I could have done better than that . . ."* Anyone who does that not only practices poor crew coordination but also opens the door wide for the apathy factor. When a pilot conceives the idea that he can do no wrong and that he already has enough experience to handle any situation, then it is already the beginning of the end.

There is an old adage that goes, *"Never trust anyone, especially yourself."* With the integral crew concept taking full swing in SAC, we have an opportunity to develop an intimate awareness of the limitations and abilities of those we regularly fly with.

Don't become complacent, however. Don't allow situations to develop that hinge on someone else's ability to recover. A few years ago, a SAC exchange officer in F-111s allowed his pilot to descend into the ground on night range mission. A few weeks previous to this, he stated he felt he could rely on his pilot in any situation, and this reliance allowed him to pay more attention to his duties. His reliance, unfortunately, also resulted in an unnecessary mishap.

We all have to realize that the apathy factor exists. Discipline is self-instilled; we don't have T-6 IPs leaning over our shoulders anymore with poised horsewhips ready to correct any and every mistake. The apathy factor may or may not ruin your career; taken to extreme, however, it will kill you.

# 4315th CCTS GOES INTERACTIVE

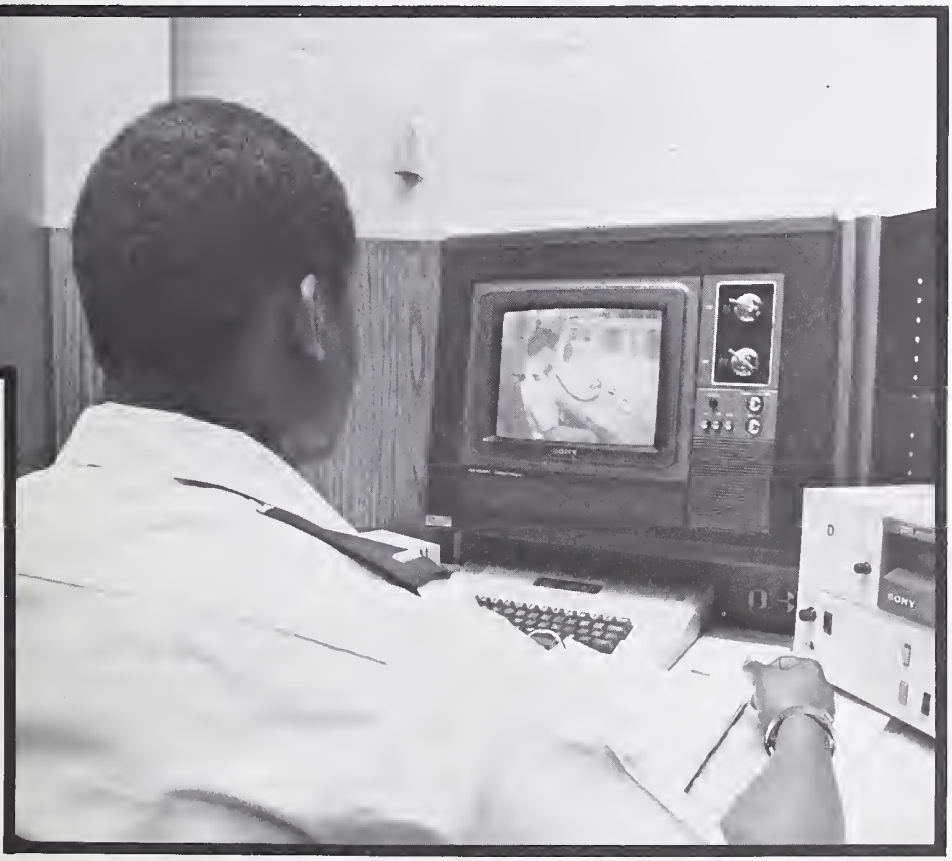


Someday a powerful new instructional system using microprocescsor control, electronic recordings, and visual displays will evolve. These systems will expand our potential for education and training. Organizations will personalize their technical training programs using these new systems. Students will benefit by playing an active roll in the learning process. They will learn at their own rate with increased retention, and get immediate feedback and retraining when necessary. That someday is today at the 4315th Combat Crew Training Squadron (CCTS).

This powerful system is computer assisted television instruction (CATI) and is the joint technology of video and computer. CATI combines the visual power of video with the sequential and branching power of computers. The system uses a micro-computer, a floppy disk unit, a video cassette player, and a TV monitor. A printed circuit card interfaces the computer to the videoplayer. CATI is easy to use, has numerous branching options and improves our missile training effectiveness and efficiency.

Our students receive a short orientation briefing on equipment operation. Once the student applies power and inserts the videotape and floppy disk, the computer provides step by step instructions to complete the program. An interactive lesson includes segments of videotape, computer generated text and computer graphics. The program automatically switches between the computer and video. At any point in the lesson, a student may be asked a multiple choice, matching or fill-in the blank question. The student responds using the computer keyboard. The computer evaluates his answers and provides a response in text or video. If the student understands the concept, the program moves on to the next sequence. If the student didn't grasp the concept, a remedial loop of computer text or videotape will retrain the material. If the remedial loops are unsuccessful in training the concept, or the student is completely lost, typing "help" will display a menu, or a table of contents. This display references to additional material such as a regulation, tech order, or assigned reading. Of course, instructors are always close at hand to provide additional help.

Students assume more responsibilities for learning in an interactive program. This responsibility increases motivation, causing greater retention of the material. Students get immediate feedback on their progress. In a typical classroom setting, students only receive limited feedback. With linear video programs there's no feedback. The prompt feedback of CATI gives students a sense of accomplishment. Incorrect concepts are retrained immediately while all the facts are fresh in the student's mind. In a classroom, a student might not ask a question for fear of embarrassment. CATI frees the individual from the limitations of the classroom.



**Students using the computer assisted television (CATI) system receive immediate feedback on their progress. CATI thus frees the individual from the limitations of the classroom.**

We are simplifying our transition to CATI by using current program texts, study guides, audiovisual products, and lesson plans. This courseware has already been validated and is easily converted to an interactive format. CATI programming is accomplished through an interface card supplying the machine language to the computer. The authoring instructor types English commands to program courseware. Updating text material using the computer in word processing fashion is easier and quicker than current procedures. CATI also records student responses. This helps monitor a student's progress during training and identifies problem areas earlier.

The 4315th CCTS has entered an era of training right out of Star Wars. Computer assisted television instruction is the instructional system of the future. We are keeping pace with industry, using the latest state of the art training equipment. CATI is easy to use, and provides us an effective and efficient way to improve our missile training programs. It could even become as contagious as PAC-Man fever. If you're ever in the neighborhood, stop by for hands-on demonstration, or call Capt Greg Murphy at 276-3663 for additional details.

**Capt Kurt G. Malmstrom**
**4315 CCTS, Vandenberg AFB**

# B-52 FUEL CONSERVATION

## Or, a funny thing happened on the way to the IAF . . .

Capt John O. Dunstan
337 BMS, Dyess AFB

***Scene: Just leveling off for a nav leg after flying a night low level route with large granite mountains.***

**P** — Hey nav, what altitude do you want?

**N** — Level off at FL 370, pilot.

**P** — 370? Tell you what, nav, why don't we level here at 330?

**CP** — Why, pilot?

**P** — Because 370 is too high for me.

**CP** — Come, come, now, pilot, admit it. You just don't want to wear your helmet.

**P** — I don't mind that. It's just too much trouble to climb all the way up there for nothing.

**CP** — What trouble? Here, I'll take it up . . .

**P** — Don't you dare touch that yoke. I keep telling you, I'll let you fly when you have more experience. Say, 2000 hours or so.

**CP** — Sorry, I lost my head. But climbing up to 370 won't be for nothing. It'll save us fuel.

**P** — Save fuel? We started off with 200,000 pounds! How significant can 4000 feet of altitude be? A few drops?

**CP** — Well, pilot, if you'll climb up to 370, I'll show you and together we'll reach new heights of knowledge.

***Next scene: Flight level 370 — Everyone on board has vowed to take revenge on the copilot after landing for that "new heights" remark.***

**CP** — OK, pilot, let's start out with a few assumptions. First of all . . .

**P** — First of all, remember who writes your OER before you start treating him like he has the IQ of an asparagus.

**CP** — Sorry. Then you tell me the answers. How much does JP-4 cost? How many sorties do we fly per quarter? Per year? How significant is a 1000 pound saving per sortie?

**P** — Pass the hollandaise.

**CP** — JP-4 costs about $1.20 per gallon. If we save 1000 pounds of fuel on this mission, assuming JP-4 weighs 6.5 pounds/gallon, then we save the government $184.62. Here at Hole-in-the-Snow AFB we fly 200 sorties per quarter, or 800 per year. If everybody saves an extra 1000 pounds per mission, our base alone would save Uncle Sam $147,692.00 per year.

**P** — Remind me after we land to submit a suggestion that crewmembers share 50% of any money they save the government. OK, then, how are we going to save a whole 1000 pounds of gas?

**CP** — We're doing it now and more. We have 750 miles from start nav to the IAF. Since it's a straight shot home we're flying at best range airspeed for the one and one-half hour nav leg and then remaining at that airspeed to our start descent point. We weigh 340,000 pounds and we'll use that 325 KIAS descent you like so much. Now if we had stayed at FL 330, we would have burned 24,600 pounds on the nav leg, 1850 pounds after end nav to the start descent point and 600 pounds during the descent to be at

15,000 feet at the IAF. The total burned would have been 27,050 pounds. Your mileage may vary.

**P** — Is this what you do in your spare time?

**CP** — I've worked with these numbers so much in my four years as a copilot that I practically have them memorized.

**P** — That reminds me. I checked the upgrade schedule and you can take heart. There are only 17 guys ahead of you now.

**CP** — Thank goodness. And I thought it was looking hopeless. Anyway here at FL 370 our fuel flow for best range airspeed is 15,200 pounds/hr. Now . . .

**P** — AHA! Caught you. You can't just compare fuel flows. What about the gas it took to climb up here, eh?

**CP** — As I was saying, we find from the climb charts that we used 1000 pounds of fuel and two minutes to get here. Now, using the remaining nav leg time, we find we will burn 23,150 pounds by end nav. We'll burn another 1900 pounds to our new descent point . . .

**P** — We only burned 1850 at 330. Why more at 370?

**CP** — Best range true airspeed is slightly slower at 370 according to the charts, so we covered a slightly shorter distance on the nav leg. We make up for it at the descent point, though. Remember you can't dispute Newton's law.

**P** — Why not? Is he with CEVG?

**CP** — Hardly. Isaac Newton said, "What goes up, must come down."

**P** — I wish someone would tell MPC that about my northern tier assignment.

**CP** — Anyway, since we're higher, we must start down earlier to get to 15,000′ at the IAF. This means that our engines will be in idle longer, burning less than 6000 pounds/hr. Using the charts for your 325 KIAS descent again, we'll burn 700 pounds and use 60 miles in the descent. So the total fuel used from start nav to the IAF is 25,750 pounds which is a savings of 1300 pounds over FL 330 in an hour and 45 minutes.

**P** — You must be a lot of fun at a party. Well, if we can save more gas by going higher, why don't we climb to 410?

**CP** — Nice thought, but we're too heavy. Although yesterday we planned for 410, you have to remember we took off two and one-half hours late this morning.

**P** — Yeah, at 0630.

**CP** — That leaves us with 42,000 pounds more fuel than planned. With our gross weight at 340,000 pounds, max range cruise altitude is about 390. We can't be efficient at 410 until we're down to 310,000 pounds.

**P** — You don't get out much, do you? All right, then what about that nav leg you made me fly last week at 330?

**CP** — That was a completely different situation. We had to squeeze in the nav leg between air refueling and low level. That made it a timing problem as opposed to today's distance problem. We had to fly best endurance altitudes and airspeeds, which vary significantly from our best range figures.

**P** — Let me ask you this. Isn't our whole mission a timing problem? It says here on my schedule that we have to fly an 8.7 hour mission. Now, by flying at best range airspeed we'll get back to the pattern sooner than if we flew at best endurance, right?

**CP** — Right.

**P** — We will still have to fly out our scheduled timing . . .

**CP** — A phrase which sends chills down the spines of crewmembers everywhere.

**P** — Burning about 27,000 pounds/hr in the pattern instead of the less than 15,000 pounds/hr high level at best endurance. Isn't that wasting fuel?

**CP** — It's not wasting fuel, it's maximizing training. While we should do everything we can to save fuel, it isn't our primary mission. We're here to fine tune our talents, polish our procedures and get every bit of training possible out of these missions. The American taxpayer works hard to pay for these sorties, so we're obligated to save as much fuel as possible, but we're also obligated to train to the max extent possible which includes all the pattern work we can get.

**P** — Do I hear fife and drum music in the background? All of this makes sense, and I'm impressed. You should be commended for your expertise.

**CP** — Thank you, pilot. It's not just my expertise, though. Any crewmember can do the same things to conserve fuel and maximize training. All they have to do is follow some basic techniques on mission planning day and then modify them as necessary in flight as we did today.

**P** — Basic techniques?

**CP** — Certainly. If you have a timing problem fly the nav leg at best endurance airspeed and as close to max endurance altitude as possible. If it's a range problem, fly at best range airspeed and as close to max range cruise altitude as possible. Remember though, unless you stay at max range cruise altitude for about an hour and 20 minutes or more, you may be more efficient if you fly lower. In any case, be prepared to modify the mission in flight if circumstances, such as a late takeoff or missed air refueling, change your gross weight.

**P** — How much money did we save Uncle Sam today?

**CP** — The 1300 pounds saved equates to $240.00. That's on paper, of course.

**P** — Of course. But the thought is there. You've earned your pay for the day. I'm so impressed by this that . . . I tell you what, copilot, you can have the landing today. You can take the aircraft . . . Copilot? . . . Co? . . . Hey nav, come on up here — have you ever seen a copilot in shock before?

ANOTHER ADVENTURE OF

# CAPTAIN GOLDILOCKS

Once upon a time at a SAC base far far from anywhere there was a young pilot by the name of Capt Goldilocks. Capt Goldilocks was an aggressive young pilot with very good hands. He had experienced many minor aircraft emergencies and handled them all without incident. He was very confident of his abilities and had great expectations for his future.

The pressures of being a combat crewmember were intense. It seemed that as soon as he proved himself on one inspection or test, there was another one waiting for him. The squadron was always preparing for something. If it wasn't the ORI, it was CEVG, and if it wasn't one of them, it was stan/eval. It seemed that every single mission was a test of some type. Now I won't say that Capt Goldilocks didn't occasionally get a little overwhelmed with all of the pressure. There were times that he wished he had one of those 9 to 5 jobs where you have every Saturday and Sunday off. He was usually so busy that he had little time for thoughts like that; besides he knew deep down in his heart that he actually liked the pressure. He knew that a successful performance on those pressure missions gave him self-satisfaction that he could get in no other job. He knew that there was no feeling in the world like landing from an ORI or CEVG flight knowing that he had "watered their eyes." He also knew that the weeks of preparation for those "big ones" could be extremely stressful.

Capt Goldilocks had been very successful in his efforts to handle the pressures. He was successful because he always made good decisions no matter what the situation. Good decisions aren't made by accident.

Why do some people make good decisions, others make bad decisions, while others can't make any decision at all? Capt Goldilocks blamed it all on the "three bears." When he first started talking about three bears, I thought maybe he was pulling some kind of stunt to get off PRP or something. I wanted to hear more about his three bears.

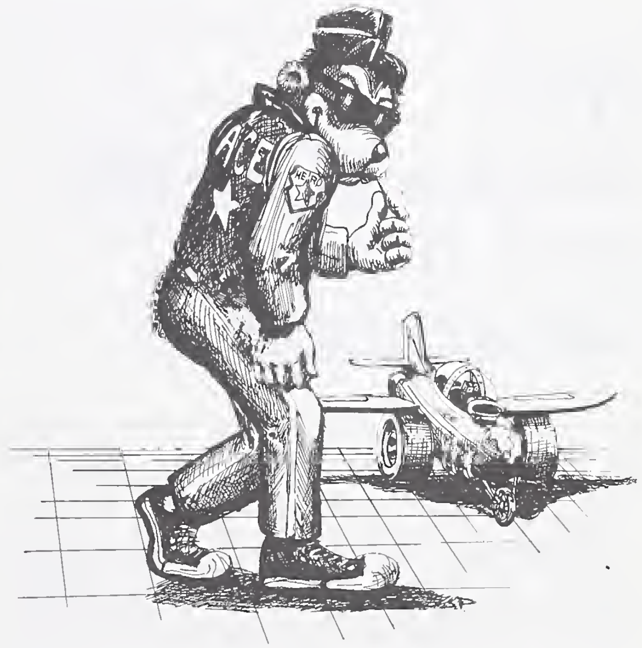
He said that the most important step in the decision process is to USE THE BOOK. Following checklists and complying with technical manuals will reduce the number of decisions that you will have to make. When in doubt, take the extra time it takes to look in the book. Don't trust your memory. Following the book will reduce the number of decisions that you will have to make, but it won't eliminate all of them. When you find yourself faced with a problem that is not covered in the book, you must rely on your decision making ability. The decision making process has three critical steps. The first step is to define the problem. This is done by first examining all possible factors that could be involved with the problem. Then you must apply your technical knowledge of the subject and your past experience with similar situations to these contributing factors to identify the problem. The second step is to examine all possible solutions to the problem. There is always more than one solution to a problem, if there wasn't you wouldn't be using this decision making process. Examine ALL possible solutions and visualize the expected results for each solution. The last step in the decision making process is to choose the best solution based on the expected results from step two. If you have been very thorough during the first two steps, the last step is very easy. If you aren't very thorough on the first two steps or if you try to skip steps or even take them out of order, you probably make a bad decision. This probably sounds like a complex and time consuming process, but you use this process thousands of times day. For most decisions where you have a lot of knowledge and a large amount of experience, this decision process can be completed in just seconds. This process will allow you to make the best possible decision. Note that I said "the best possible" decision. It won't guarantee you the correct decision, in fact, many situations do not even have a correct decision. You have to make the decision based on YOUR knowledge and YOUR experience level.

This is where Capt Goldilock's three bears come in. The three bears are three psychological factors that can invade the decision process. The decision making process really is not extremely complicated unless you allow one or more of three bear factors to interfere with your logical solution process. If you do let one of these factors influence your decision process, your chances for making a good decision are greatly reduced.

The Papa Bear factor is peer pressure. This pressure can appear either directly or indirectly. Maybe you decided to delay takeoff until a certain piece of equipment was fixed. Later you hear other pilots in the squadron discussing your maintenance problem — they would have taken the aircraft as it was. Maybe you have an additional pilot flying with you and you have a maintenance problem. Will you make the same decision that you would have made if he was not looking over your shoulder? These are examples of direct peer pressure. Indirect peer pressure involves the image you see of yourself as it relates to your peers. Some people might call this the MACHO problem. If you make a decision based on "what will THEY think of me if I don't take this airplane," you are being influenced by indirect peer pressure. THEY are not flying the airplane.

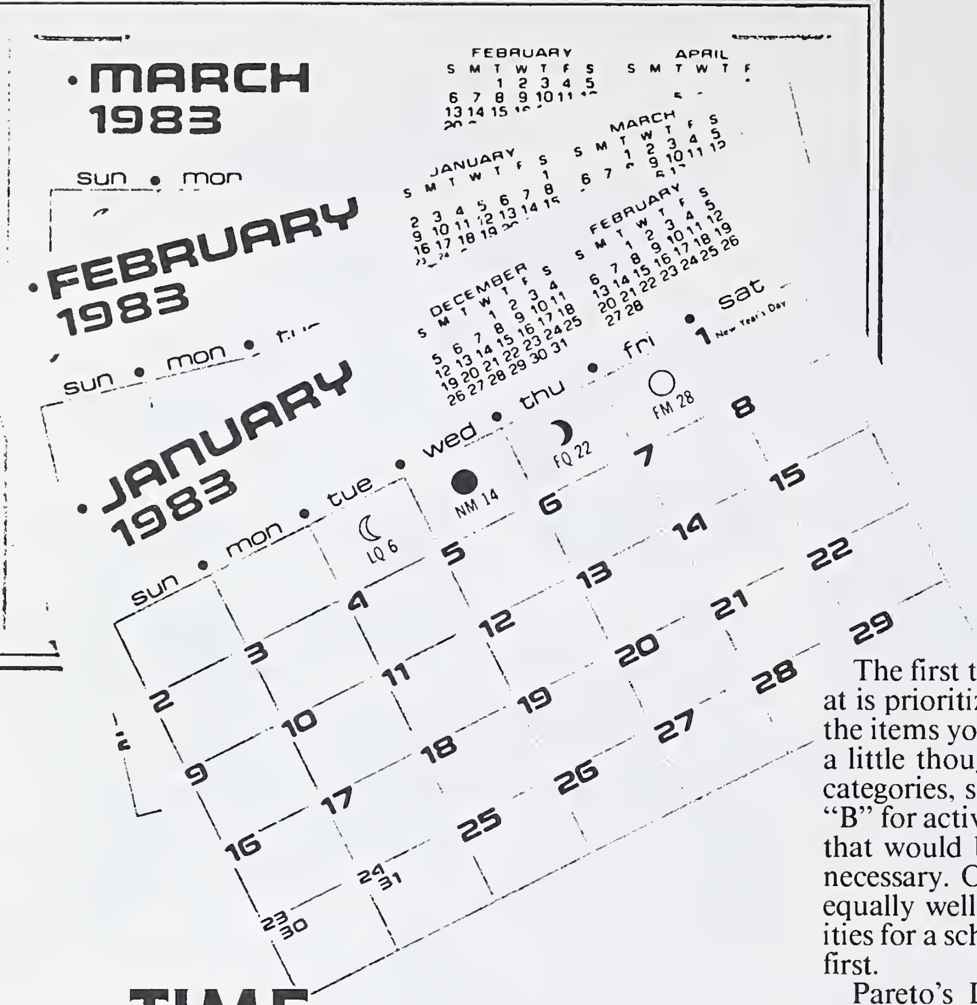
The Mama Bear factor is the influence of the "heat of the battle" on the decision process. Some missions are more important than others — but no mission is more important than safety. We all get involved in the BIG missions. It is important that we make every effort to accomplish the mission. When the pressures of the mission interfere with sound logical reasoning, you may find yourself caught in a bear trap.

The Baby Bear factor is basic immaturity. I don't care how old you are, watch out for this one. Overconfidence and laziness will let baby bear out of his cage. When you start taking short cuts or feel that you don't need to look a situation up in the book because you know what it says, you are letting the baby bear factor invade your decision making process. This factor tends to creep up on you, and does not seem near as awesome as papa bear or mama bear, but believe me, even a baby bear can hurt you if you aren't careful.



There you have Capt Goldilocks and his three bears. There are many pressures on all of us and we face many critical decisions each day. I don't know about you, but the only place I want to see a bear is in a zoo. When you are faced with a tough decision, take an extra second and look for the three bears. If one of them is in the airplane with you, put it back into its cage before you make your decision.

Capt Thomas D. Brown Jr.
340 BMS, Blytheville AFB



# CFIC corner

Capt Barry J. Chisholm
CFIC, Castle AFB

# TIME MANAGEMENT and the busy crewmember

Finished everything you've wanted to do lately? If you have, congratulations. You're in exclusive company. If not, I have some techniques for managing your time that you may want to try.

Time management, or time awareness, can be thought of as a way of managing yourself and of getting the most out of your day. The benefits of effective time management include better arrangement of priorities, better planning of activities, and an overall ability to accomplish more in less time. For the flyer, time awareness can also improve our in-flight performance.

Many books and articles have already been written on time management and how to work efficiently. You'll find a partial listing of these references at the end of this article. However, to gain the most benefit from time management, we should apply some of these techniques to situations that SAC crewmembers encounter regularly.

## Techniques

The first time management technique we'll look at is prioritizing. If you can make a "to do" list of the items you'd like to do on a particular day, with a little thought you can separate these items into categories, such as category "A" for urgent items, "B" for activities you should do, and "C" for items that would be nice to accomplish but aren't that necessary. Other categorizing methods may work equally well for you. Simply stated, setting priorities for a schedule is a matter of putting first things first.

Pareto's Law, or the 80/20 rule as it is also known, is widely used in business management, and can be applied in conjunction with the prioritizing method discussed above. Basically, the 80/20 rule as applied to time management states that 80% of the value of a list of activities will be concentrated in only 20% of those activities. So, if you made a list of ten things to do, you would expect that the top two items would contain 80% of the entire list. This may sound farfetched, but try it. As I mentioned earlier, Pareto's 80/20 rule can be applied with the ABC priority method. Let's look at figure 2 and compare it with figure 1. In our hypothetical example of a list of ten things to do, using the 80/20 rule, 80% of the value of these activities is concentrated in items 1 and 2. Taking it a step further, your priority "A" items for that day just might be the first two items on your list. These two "urgent" or "must do" items may account for 80% of the value of the work you do on that day, and awareness of this 80% can help you arrange an optimum schedule for yourself.

A third time management technique will help you avoid procrastination. Even with the finest "to do" list in the world, unless we apply ourselves to accomplishing those items in a reasonable time frame, they won't get done. The balance sheet technique will help you analyze what you have to do. Think about that undesirable but necessary task you've been putting off. Now, on the left side of a piece of paper, list the reasons why you are putting off that task. On the right side, list the benefits that result from accomplishing that task. Seeing these benefits on paper may just shock you into getting that job done.

But what do all these nice methods have to do with flying? Hang in there and we'll see. . .

## Some Applications

Mission Planning. On any mission planning day, we naturally want to plan the mission as thoroughly as possible and then brief it with the other crewmembers. So if we were to prioritize activities for that day, planning and briefing would certainly head the list and become the "A" items. And you may find that the 80/20 rule holds true for these "must do" items. "B" and "C" items can be done once the "must do" activities are accomplished. What you put down on your list as a "should do" or "nice to do" item will vary but I have a recommendation: why not set aside time to review in depth something that applies to that particular flight, such as an unusual bomb run or air refueling rendezvous. Or you may want to study an aircraft system that you know you'll be using on that flight. If you make one of these study tasks a "should do" item on your list, and don't put it off, you can plan your day to include it. In short, the ABC priority method can really help make the most of your mission planning day.

In-flight. Again, the ABC method may be applied. However, on anyone's in-flight priority list, flight safety must be at the top. All other activities are subordinate to this number one priority. As for the rest of your priorities, when faced with compressed time situations, it helps to remember some priorities for mission accomplishment. These priorities can be found in governing regulations or may have been established on mission planning day. As an example, if a B-52 EWO needs to send a routine weather report, but is only five minutes away from his next ECM run, he would be wise to prepare his equipment for the ECM run and do the weather report after the run. Section eight of the B-52 Dash-1 describes responsibilities of the EW officer, and ECM heads the list. Of course, weather reports are important, but in this situation they may be less urgent than an imminent ECM run. You can probably think of other time prioritizing situations that apply to your specialty.

Alert. Speaking from experience, alert duty is a terrific time to procrastinate. But if you have something in mind that you want to do while on alert, why not set yourself a goal and get it done? The task may be anything, but you probably have enough resources and references on alert to really have some thorough study or discussion about almost any kind of flight procedure or aircraft system. To help avoid procrastination on this you can try the balance sheet technique explained earlier. Improving your knowledge or skills while on alert can give you a good sense of accomplishment.

## Time to Close

The time management techniques you've seen here are only a few of many worthwhile ways of improving our use of that fleeting resource. If you can think of other ways of managing your time as crewmembers or have used a time management technique to help flight safety, we'd like to hear from you. Give us a call at AV 347-2235/2236. Best of luck to you in improving your in-flight performance through better time awareness. Have a safe flight.

PRIORITIES

(A) URGENT

(B) SHOULD DO

(C) NICE TO DO

Figure 1

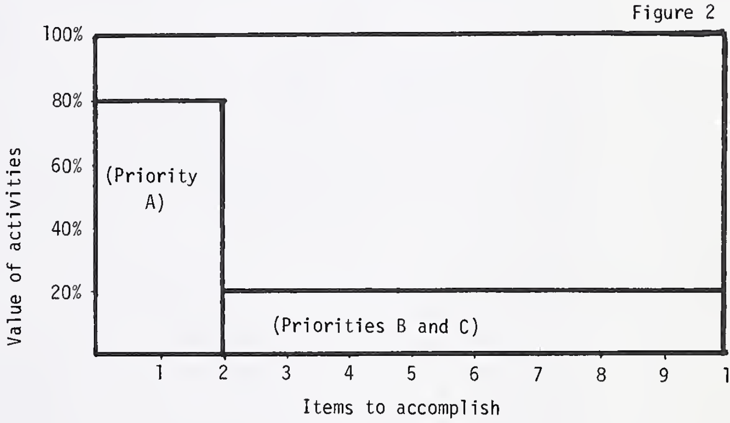
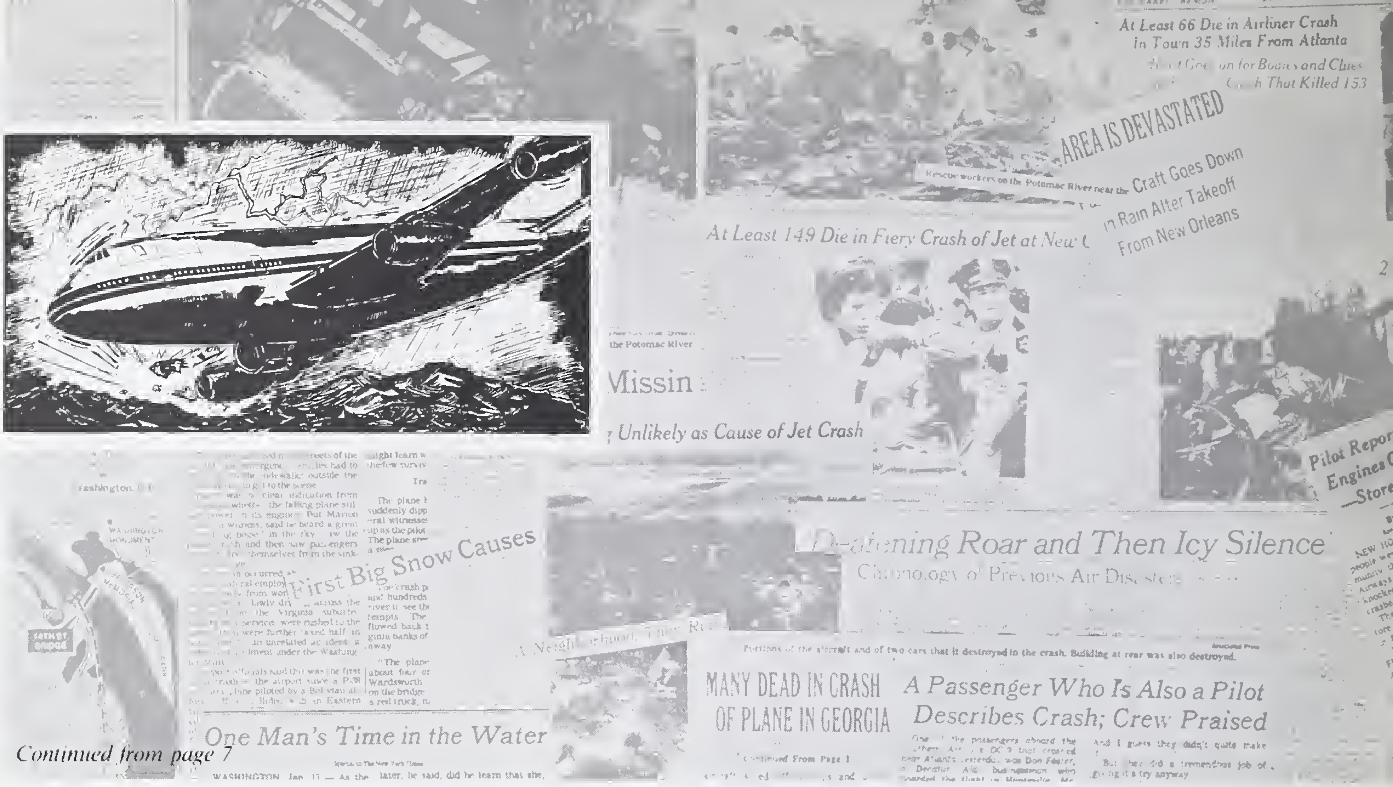


Figure 2

### Additional Time Management References

1. Lakein, Alan, **"How to Use Your Time Wisely,"** U.S. News & World Report, Washington, DC: U.S. News & World Report, Inc., Jan 19, 1976, pp. 45-47.
2. Mackenzie, R. Alex, **"How to Make the Most of Your Time,"** U.S. News & World Report, Washington, DC: U.S. News & World Report, Inc., Dec 3, 1973, pp. 45-54.
3. Smith, Manuel J., **When I Say No, I Feel Guilty.** New York: Dial Press, 1975.
4. Douglass, Merrill E., **Manage Your Time, Manage Your Work, Manage Yourself.** New York: AMACON, 1980.
5. LeBoeuf, Michael, **Working Smart.** New York: McGraw-Hill, 1979.


At Least 66 Die in Airliner Crash In Town 35 Miles From Atlanta
AREA IS DEVASTATED
Craft Goes Down in Rain After Takeoff From New Orleans
At Least 149 Die in Fiery Crash of Jet at New
Missin
Unlikely as Cause of Jet Crash
Pilot Report Engines
First Big Snow Causes
Deafening Roar and Then Icy Silence
Chronology of Previous Air Disasters
MANY DEAD IN CRASH OF PLANE IN GEORGIA
A Passenger Who Is Also a Pilot Describes Crash; Crew Praised
One Man's Time in the Water

*Continued from page 7*

scent reached 17,000 fpm. The wreckage area was incredibly small at 100 by 180 feet; the aircraft plunged straight down.

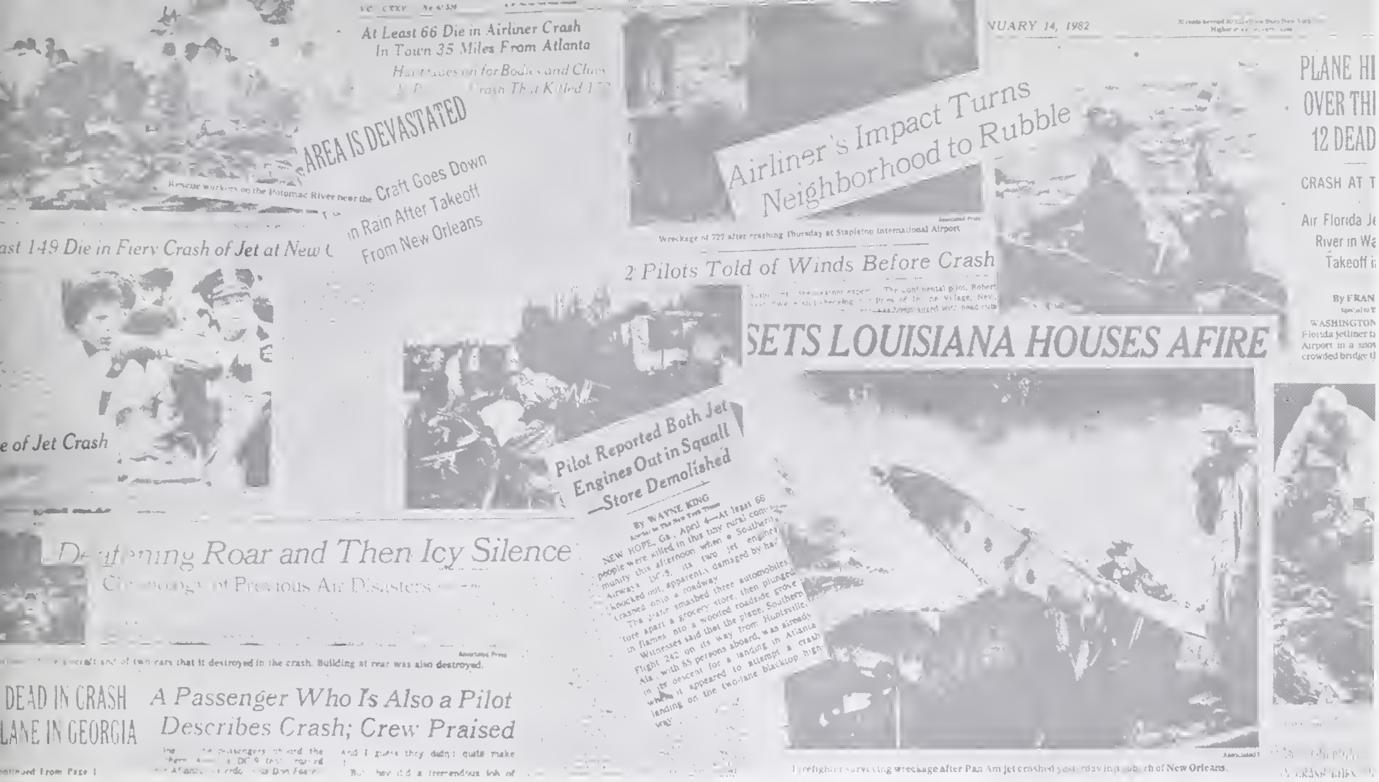
The safety board found that contrary to standard operating procedure, the flight crew had not activated the pitot heat. The board checked with other carriers and found that only some insisted on the use of pitot heat during all flights. Those that did not previously, quickly changed SOP to include mandatory pitot heat on all flights. The board recommended to the FAA that a system be installed to indicate when the pitot heat was not operating with a warning light; and to amend the FAR's to require the use of pitot heat for all flights.

The board concluded that the probable cause of this accident was a loss of aircraft control due to the "crew's failure to analyze the problem and correct the aircraft's high angle of attack (climb), low speed stall and descending spiral." The stall was caused "by the crew's improper reaction to the erroneous airspeed which had resulted from the blockage of the pitot heads by atmospheric icing."

It appears that inattention to detail could be at fault here. A failure to recognize what your airplane is or isn't capable of doing can complicate any problem. Pitot heat is on every checklist these days. On air carrier aircraft, the older ones have been retrofitted and new ones come equipped with a caution light for electrical power failure to the pitot probes and static ports. Most of our older military aircraft do not enjoy this luxury. We turn it on and hope it works. Therefore, familiarity with the effect of pitot icing in the event of probe failure could save your life.

The third and last type of weather problem I'll address is fog. The basic detriment to flying safety is, of course, restricted visibility. An airborne aircraft will attempt a precision approach if the visibility is at or above published minimums for that approach. If not, the pilot will hold until the visibility improves or he'll divert to another field. It's pretty cut and dry. However, where the visibility can be a severe problem is during ground operations at a high density airport that is not equipped with a radar sophisticated enough to provide aircraft separation in the taxi environment.

Such is the case when on March 27, 1977, the worst ground disaster in history took place on the island of Tenerife in the Canary Islands. Los Rodeos Airport on Tenerife had no terminal radar of its own, but was reputed to be a good airport. It did have a control tower, ILS and a concrete runway 11,155 feet long. Los Rodeos airport had become a high density field due to being overwhelmed by aircraft that diverted there from Las Palmas, Grand Canary Island. Las Palmas was temporarily closed due to a bomb explosion. When Las


At Least 66 Die in Airliner Crash
In Town 35 Miles From Atlanta
AREA IS DEVASTATED
Craft Goes Down
in Rain After Takeoff
From New Orleans
Airliner's Impact Turns
Neighborhood to Rubble
2 Pilots Told of Winds Before Crash
NUARY 14, 1982
PLANE HI
OVER THI
12 DEAD
CRASH AT T
ast 149 Die in Fiery Crash of Jet at New
SETS LOUISIANA HOUSES AFIRE
e of Jet Crash
Pilot Reported Both Jet
Engines Out in Squall
—Store Demolished
Deafening Roar and Then Icy Silence
DEAD IN CRASH
LANE IN GEORGIA
A Passenger Who Is Also a Pilot
Describes Crash; Crew Praised

Palmas finally passed to Los Rodeos that it was open again for traffic, Los Rodeos notified all flight crews that flights would begin as soon as traffic was untangled. First to taxi by virtue of close proximity to the runway was a KLM B-747. Its captain was a 25 year veteran who was also an instructor. Next to taxi was a Pan Am B-747 whose skipper was a 32 year veteran along with a very experienced first officer. Due to fog, the visibility was at takeoff minimums.

Both aircraft taxied for takeoff down the single runway. KLM was directed by tower to proceed to the end for a 180 degree turn and hold for takeoff clearance. Pan Am was directed to depart the runway at the last exit prior to the end of the runway and report clear. Both aircraft acknowledged these clearances. KLM called ready for takeoff and for its ATC clearance. They received their clearance, acknowledged it and finished with the statement "We are now at takeoff." The tower came back with "Okay; standby for takeoff, I will call you." Then tower called Pan Am to report the runway cleared. Pan Am came back with "Will report runway cleared." Tower replied "Thank you." Seconds after this transmission the two 747's collided. It appears that the Dutch crew, having obtained their ATC clearance, believed the runway to be clear and takeoff clearance had been granted.

The KLM aircraft ripped the top of the Pan Am 747 apart. The flight deck fell into the first class section. The wings collapsed onto the runway with the engines still running.

The KLM airplane crashed back on the runway and exploded like "a bomb." All 234 passengers and 14 crewmembers died. With the deaths on the Pan Am plane, the total count was 572 persons killed with others succumbing later due to burns suffered in the crash.

Primarily, human error and ATC were to blame for this tragedy. The KLM captain's decision to start his takeoff run without tower clearance was found to be the probable cause, according to the Spanish investigation. Fog contributed in so far as the pilots in both aircraft could not see each other on the same runway. To many of us, this is not an unusual situation. A lesson can be learned chiefly in regard to radio discipline and paying close attention to the radio; be aware what is happening on the frequency. You might save your own day if, when under low visibility conditions, you've been cleared to taxi down the runway and soon after hear another callsign cleared for takeoff. Due to the controller strike there is much more inexperience seated at consoles in enroute and terminal control areas. Be aware; the odds for a mistake on their part is larger than it was two years ago.

# THREE POINTS OF VIEW

The 308th Security Police Squadron, Little Rock AFB, has widely been recognized as being one of the best security police units in the Air Force. In the past, the members of the 308 SPS have been recognized as being the best security police large-unit in both 8AF and SAC, received the Curtis E. LeMay Trophy and sent top teams to Peace Keeper Challenge and the SAC Missile Combat Competition. The past two ORIs produced ratings of excellent. The following article consists of three viewpoints of the organization and its mission.

**SrA Jerry C. Kloehr:** Trying to explain your job to someone is very difficult especially since when you're used to it, the job seems rather boring or just second nature. But everybody plays a part in the overall mission and not even the most menial of tasks should be overlooked.

Right now, I'm assigned to duty with the 308 SMW, Little Rock, more specifically, the 308th SPS commanded by Lt Col Peter E. Morrelli. For some time now I have been in direct support of the Titan II missile complexes based in northcentral Arkansas. By working in direct support I'm referring to missile armed response team (MART) duty. These teams work directly with the missile combat crews. The MARTs are always available to respond to various situations in the missile field. Our job has its ups and downs just as others. Even though when we go on alerts we know what to expect, no two alerts are the same. The initial duties of the MART deal with the security aspect concerning priority "A" weapons and the systems in support of these resources. MARTs must be prepared to handle any number of different situations 24 hours a day on a moment's notice, everything from routine AN-TPS (topside sensor) alarms through overt attacks on special weapons convoys.

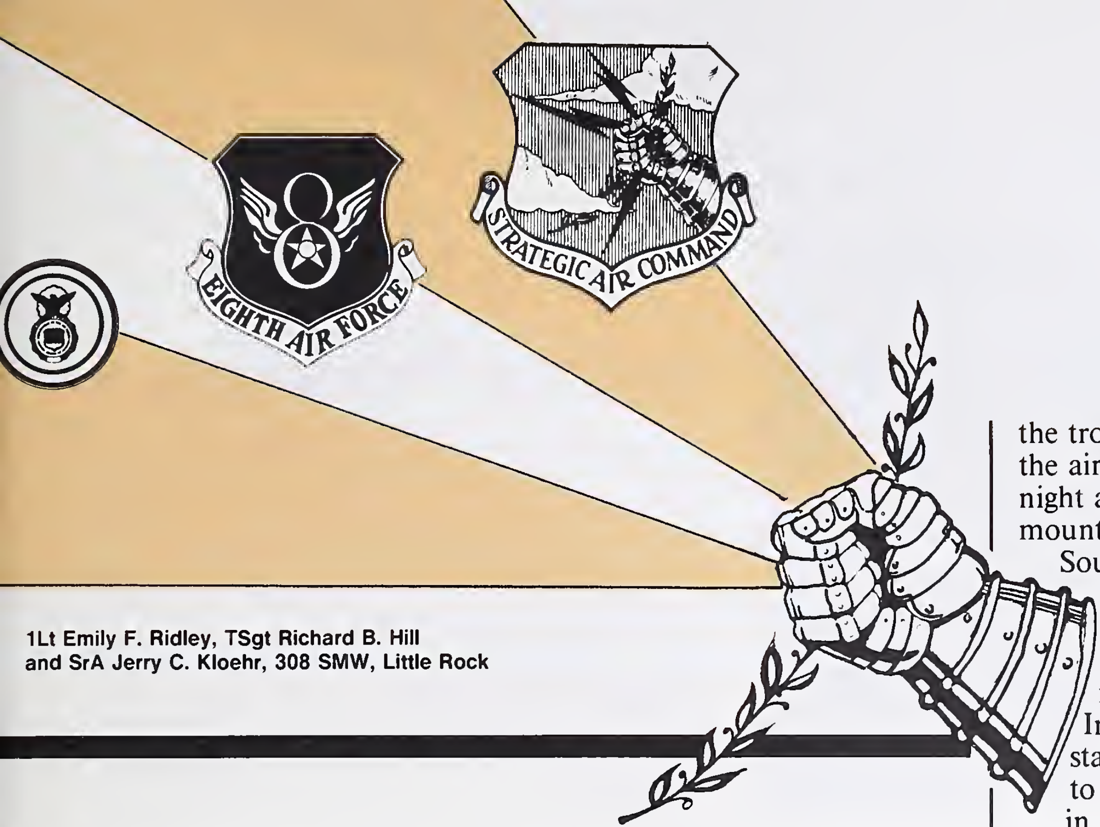
A MART's duty can range from long hours with a variety of constantly changing situations to just sitting around and waiting for something to happen to break the monotony. On several occasions MARTs have been called on to aid members of the surrounding civilian community dealing with everything from automobile accidents to communities destroyed by tornadoes. One time we even had the unpleasant task of being the first on the scene of a military plane crash.

I truly hope that at least one statement I've made gives someone a little better insight as to what we as security policemen expect and face on a daily basis. Even though the job becomes tedious, tiresome and sometimes downright frustrating, we all know at the back of our minds we each have a big responsibility that cannot be given anything but our utmost effort to insure that the "total mission" is met.

**TSgt Richard B. Hill.** 0530 hours. What an unreal time to have to drag out of bed. Well another day. Another . . . I'm an aircraft flight chief with the 308 SPS, Little Rock AFB. I have the supervisory responsibility for 33 airmen and NCOs who in turn perform security duty involving a weapons storage area and KC-135 aircraft. My primary thoughts this early in the morning run along the line of, "*I wonder how many of my men had their PRP yanked last night,*" and "*How many nasty grams do I have in my flight box?*" Well, two cups of coffee later, I'm more or less ready to face the day. At my duty section, several flight members greet me at the door with complaints, gripes and sad stories, such as, "*Sarge, why do I have another walking post today?*" Or, "*Sarge, guess who got another parking ticket?*" Short of pulling my hair out (or theirs), I resolve what personal matters I can prior to weapons issue and guardmount.

Guardmount is a formal assembly of flight security policemen whereby rollcall is taken and the flight is formally inspected for proper dress, appearance and required duty equipment. The flight is then briefed on current passons, weapons, vehicle, ground safety and security conditions. Once the formalities are out of the way, then "warm fuzzies" and "cold pricklies" are handed out. I'm a firm believer in the idea that if someone goofs up on or off the job he should receive just due punishment. On the other hand, an individual most definitely should receive some form of a pat on the back for a job well done and as everyone enjoys praise, this should be done in front of his peers. Barring any further complications, the flight is released to go to work.

The remainder of the day is fairly routine. Once the duty roster is completed for the next day, then post checks and security response exercises are conducted by myself, my assistant flight chief, or both of us together. My post checks entail a visit to each security resource that is protected by a SAC security policemen. This visit involves the guards vehicle or gatehouse structure, quizzing the guard on job knowledge and basically getting on a one-to-one basis with the individual. This way the SP will feel comfortable to discuss any on or off-duty related situations which may arise.



**1Lt Emily F. Ridley, TSgt Richard B. Hill and SrA Jerry C. Kloehr, 308 SMW, Little Rock**

Security response exercises are war games involving mobile and static posted security personnel. These may include bomb threats, hostage situations, attempted subversive penetrations or armed intervention which can involve a variety of heavy weapons. Upon termination of the exercise, responding forces will group for a critique. Again, this is where the warm fuzzies and cold pricklies come to light.

Basically, the job of an SP guarding priority, A, B, and C resources, on a day to day basis, can become routine to the point of boredom. Long, lonely hours, during virtually every form of weather possible, tend to alienate an individual against the security police field. When you have a young airman walking the restricted area line around an alert aircraft in snow, sleet and subzero weather, it's extremely difficult to motivate that airman by telling him his presence is necessary for the security of that aircraft.

When General (ret) Curtis E. LeMay, former CINCSAC, was asked, *"How do you try to convince a young security policeman that his duty performance and job commitment is instrumental to the security of the Free World?"* He answered, *"To be perfectly honest, that will undoubtedly be the hardest job you will ever have."*

**1Lt Emily F. Ridley.** As a security police shift commander at Little Rock AFB, I am responsible for approximately 50 persons guarding Titan missile sites, KC-135s and a weapons storage area. Although the 308 SPS is a tenant unit, and has no law enforcement or mobility commitments, we still have a pretty big job. The missile field covers a large portion of north-central Arkansas.

There are two other shift commanders besides myself, we work a 24-hour schedule with 48 hours off, same as the missile security flights. On a typical day, I go to work at about 0600 and get off around 0700 the following morning. During the day, I usually go out to the missile field for six or eight hours, making post checks and observing exercises pulled by the ranking SP NCO in the missile field (missile complex supervisor).

Later I go back to base and do just about the same thing with the troops guarding the WSA and the airplanes. Ideally, after midnight aircraft security guardmount, I make it to bed.

Sounds boring, right? Wrong. One thing about being a shift commander is that you never know what may happen during a shift. In the two years I've been stationed here, I've responded to a C-130 crash, gotten in the middle of fights in the barracks and seen funnel clouds drifting across the missile field, just to mention a few things.

Once you hit the sack, you never know when you're going to be awakened by central security control, saying, *"Airman Smith thinks someone is shooting at him,"* or someone from the squadron has been thrown in the slammer in downtown Little Rock and since the First Sergeant is on leave you have to go and pick him up.

Not everything is that traumatic though. I've learned a lot about the security police career field through listening to a lot of good airmen and NCOs. Even though this is my first assignment I can't imagine working with a better group of people. To me, it's a great sense of achievement to know that I've talked someone into enrolling in a college course or to put someone in for an award and find out that they actually got it. For all of the difficulties of being a shift commander, losing sleep and getting involved in sticky situations, I can still think of few other jobs I'd rather have.

## Aircraft Maintenance

SrA Alan L. Bartos, 376 FMS, Kadena AFB, is SAC Maintenance Airman of the Month. Airman Bartos has demonstrated exceptional technical ability, leadership and initiative in his duties as a pneudraulic technician. Recently, a RC-135 developed an engine hydraulic system malfunction during the preflight inspection. Airman Bartos determined that the number two hydraulic pump was leaking beyond allowable limits. Unable to procure a pump from supply, he cannibalized a pump from another aircraft and installed it on the mission aircraft in record time resulting in all mission requirements being met. His high quality work directly contributed to the Aerospace System Branch's Outstanding rating following a SAC MSET visit.

## Missile Maintenance

A1C Melvin J. McGee, 351 SMW, Whiteman AFB, is SAC ICBM Maintenance Airman of the Month. Presently assigned to the Reentry Vehicle branch, Airman McGee performs maintenance and inspection on MK11C RVs, associated equipment and materials. While under the intense pressure of a recent 3901 SMES inspection, Airman McGee accomplished three complicated tasks on RV maintenance virtually error-free and was subsequently named as an Outstanding Performer. Airman McGee has also received a Quality Control Achievement Award, given only to those technicians who have not failed any task evaluations and who have received at least four favorable comments on QC reports. A1C McGee is also a versatile maintenance technician as he is also qualified to perform maintenance on the MK-1A Penetration Aid.

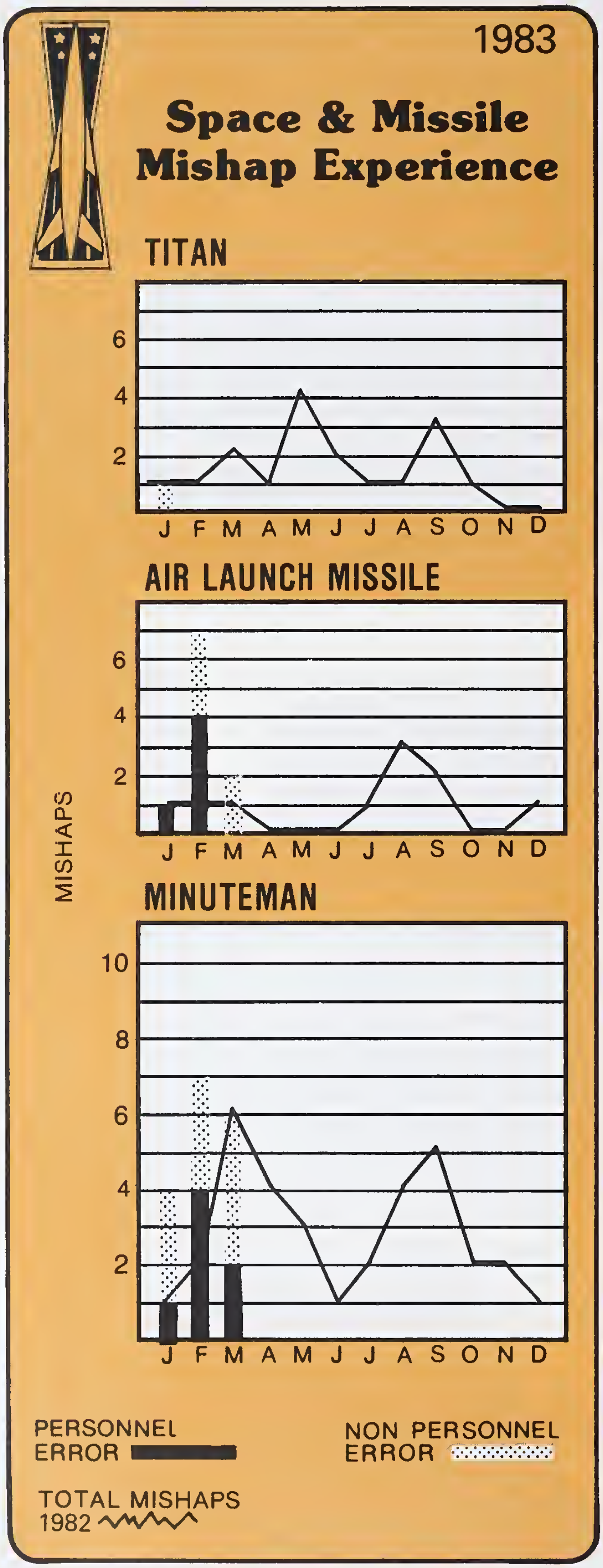
# PROFESSIONAL PERFORMERS

# Flying Crew

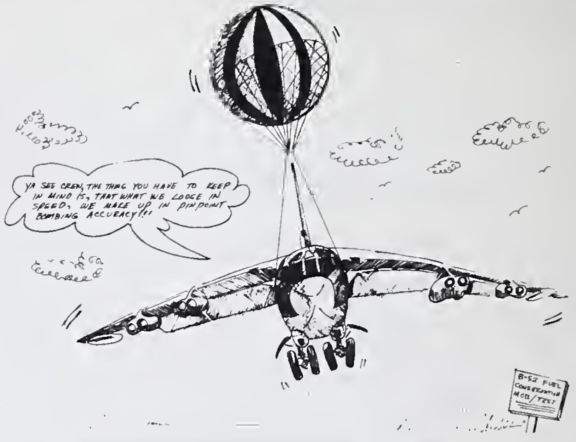
Capt Steve Chunn, IP, 2Lt Tom Maloof, CP, 2Lt Mat Oetken, NN, and TSgt Dennis Thornburg, BO, 2 ACCS, Offutt AFB, were receiver refueling in an EC-135 as part of the navigator's annual check ride when fuel began to flow from the air refueling manifold onto the navigator's position. Refueling was immediately terminated and the crew discovered a one-half inch puddle of JP-4 in the navigator's overhead compartment. With no specific guidance for such an emergency offered in any tech order, the crew shut down the navigator's equipment by pulling circuit breakers remotely located from the fuel rather than risk the possibility of a spark from switch activation. To prepare for an immediate landing, they changed positions with their air refuelable tanker and offloaded enough fuel to be below maximum landing gross weight. With their transponder turned off, the crew maintained cell formation with the tanker for ATC identification and flew a TACAN approach to Offutt AFB for an uneventful landing.

# Flying Crew

Capt Bruce A. Peterson, AC; 2Lt Mark L. Blanchard, CP; 1Lt Robert M. Lyles, N; and SrA Michael S. Rathbun, BO, 68 AREFG, Seymour Johnson AFB, had just launched as number three in cell on a BUY NONE mission supporting the 19 BMW. The number two hydraulic pump inoperative light began flickering on and off. Noticing that the left system quantity was rapidly decreasing, the AC depressurized the left system and ordered the number two hydraulic pump isolated.The hydraulic reservoir quantity continued to decrease until it indicated empty (it was later discovered that a hydraulic line to the number one engine had broken and allowed the hydraulic fluid to pump overboard). The crew discussed the situation and decided to continue the mission. At end of air refueling, however, a check with METRO found the weather at home station had deteriorated rapidly to low ceilings with strong gusty crosswinds. Capt Peterson elected to divert to Robins AFB. During the descent, the crew manually lowered the landing gear and executed an ILS to an uneventful landing with the copilot doing the braking.



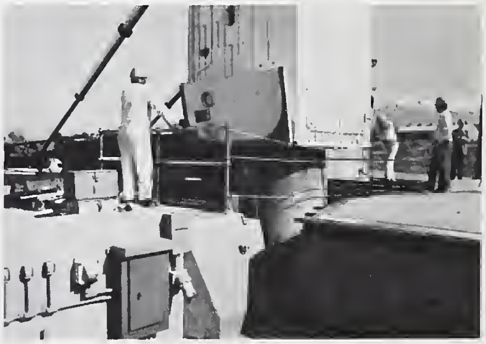
# CREWTOONS


YA SEE CREW, THE THING YOU HAVE TO KEEP IN MIND IS, THAT WHAT WE LOOSE IN SPEED, WE MAKE UP IN PINPOINT BOMBING ACCURACY!!!
B-52 FUEL CONSERVATION MOD/TEST

OK GUNS, GRANTED, IT'S GOT MORE FIREPOWER, IT'S MORE ACCURATE, AND IT'S MORE RELIABLE... BUT, THE REGULATIONS ARE SPECIFIC, PERSONAL MODIFICATIONS ARE NOT AUTHORIZED!!!

**Contributed by SSgt Terry McKinney, 441 BMS gunner, Mather AFB.**

OOPS! Many of you eagle-eyed safety observers spotted a safety violation in this picture. Even though this photo was taken at the Hill Engineering Test Facility, safety barriers are not to be leaned on. Barriers, whether portable or permanently installed, are to warn you of a potentially dangerous condition. They are not meant to support or prevent one from falling. (Ref: TO 21M-LGM30G-2-10 para 9-3,7e; TO 21M-LGM30G-2-10-1, para 10-3,7e; etc.



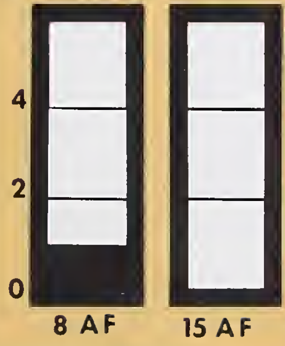
STRATEGIC AIR COMMAND

# SAC'S TEN YEAR FLYING SAFETY RECORD

### CLASS A FLIGHT MISHAPS

| YEAR | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TOTAL MISHAPS | 5 | 8 | 4 | 4 | 4 | 1 | 5 | 4 | 4 | 2 | 1 |
| FLYING HOURS 100,000 | 6.1 | 5.1 | 4.2 | 3.9 | 3.7 | 3.6 | 3.6 | 3.4 | 3.5 | 3.5 | .81 |
| FATALITIES | 0 | 14 | 7 | 22 | 10 | 5 | 7 | 2 | 14 | 9 | 7 |
| RATE | .82 | 1.6 | 1.0 | 1.0 | 1.1 | .28 | 1.4 | 1.2 | 1.2 | .58 | .32* |

*Estimated Rate based on 310,000 Flying Hours



**29494**

MARCH FLYING HOURS

**81431**

1983 FLYING HOURS

| APRIL | B-52G |
|---|---|

1983 MISHAP STATS

# Well Done

Capt Michael D. Brashear, an IN stationed at Kadena AFB, was assigned as the supervisor of flying early on the morning of Jan. 19, 1983. Even though a "Last Chance" or drive-around inspection was not required by regulation at that time, Capt Brashear always positioned his vehicle on an adjacent taxiway so that he could observe departing aircraft.

As TUNED 50, a KC-135A manned by a crew of five and carrying 32 passengers, taxied by his position, Capt Brashear noted what appeared to be smoke coming from the area of the left main gear; however, he was unable to ascertain the extent or source of the smoke due to darkness. Capt Brashear contacted the crew via UHF radio and recommended they stop the aircraft so that the smoke could be investigated.

A wooden main gear chock, six inches by six inches by four feet in length was found jammed in the left main gear. When the chock was discovered and removed, several inches of wood had been worn away and the number five tire was hot due to friction caused by rubbing against the chock.

Investigation revealed that the chock had most probably been placed too close to the rear wheel to allow for tire expansion during ground refueling. As the aircraft was refueled and its gross weight increased, the tires expanded exerting great force on the chock causing it to adhere to the tire. As the aircraft taxied slowly out of the parking spot, the chock was drawn up and over the tire where it wedged between the landing gear support strut and the number five tire.

Had Capt Brashear not intervened, the results of an attempted takeoff with the chock lodged in the main gear could very possibly have been catastrophic.

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Crew E-20 of the 19 BMW, Robins AFB, Capt Bob Kenney, FP; 2Lt Duane Davis, CP; Maj Alan Kirby, RN; Capt Mike Hagen, IN; Capt Joe Jordan, IEW; and SSgt John Cate, gunner, were on a B-52G integral crew training sortie out of Robins AFB when equipment and weather put their skills and professionalism to the test.

The flight progressed normally through gear and flap retraction when ATC advised the pilot that the aircraft transponder appeared to be inoperative, and at the same time the aircraft began to pick up icing. ATC would not allow the aircraft to enter the positive control airspace (PCA) with an inoperative transponder, so a level-off was accomplished at 17,000 feet.

After coordinating the fuel status and mission with the copilot and navigator, the pilot elected to return to Robins. A clearance to return to home base was obtained and a lower altitude was requested in an attempt to burn down fuel and get out of the icing conditions. ATC would not clear the aircraft below 11,000 feet due to conflicting traffic. At this altitude icing was still present, but the crew's primary concern was a line of thunderstorms the radar navigator was picking up west of their position. Deviations for weather was accomplished and things began to calm down when suddenly the aircraft was severely jolted and a bright flash was seen off to the left side of the aircraft. The aircraft experienced about three minutes of heavy buffeting, vibration and rolling. The pilot advised the crew that the aircraft had been struck by lightning and instructed all crew positions to check out their systems in an attempt to determine the extent of the damage. All systems seemed to work normally, and after the vibration and buffeting ceased, the controllability of the aircraft was checked. The aircraft flew normally and required only a small amount of lateral trim.

The navigator immediately plotted the aircraft position, time, outside temperature, altitude, etc. The radar navigator continued a close watch for thunderstorms and the EW and gunner passed all necessary information to the command post. The pilot instructed the EW to check the structure of the aircraft visually with the sextant. No visible damage could be seen. The pilot declared an inflight emergency. While avoiding more thunderstorms, the crew returned the damaged aircraft to Robins for a safe and uneventful landing.

Postflight inspection discovered two small holes and a considerable amount of paint burned off of the left wing tip. A three and a half foot square section of the wing trailing edge was missing along with damage to all ECM antennas on the right wing tip.

The superior airmanship and professionalism of Crew E-20 was exercised to the fullest numerous times during the flight. Crew coordination, flying abilities and navigational techniques definitely aided in recovery of this valuable SAC resource.

# SAC SAFETY SCREEN

These Warriors . . . The Cutting
Edge of The National Resolve

**524 BMS, Wurtsmith Crew S-10:** IP Maj Dennis D Melton, CP Capt William E Gillespie, IB Capt Eugene J Caisse, NN 1Lt Kevin J Wilson, IE Maj Walter W Foley, IS MSgt James A Johnson

**920 AREFS, Wurtsmith Crew R-141:** AC Capt James A Bontadelli, CP 2Lt Robert P Hogan, NN 2Lt Robert A Stowe, BO A1C Todd Wellman

**70 AREFS, Grissom Crew E-191P:** AC Capt Mark E Gilzean, CP Capt Paul J Wida, N 1Lt Michael J Iacampo, BO SSgt Tony J Compton

**305 AREFS, Grissom Crew R-133:** P Capt Lawrence Balash, CP 2Lt Gregg E Dotter, N Capt David W Jensen, BO SSgt Gregory E Genenbacher

**384 AREFS, McConnell Crew R-163:** P Capt Francis M Privett, CP 1Lt Timothy O Hocking, N 1Lt William J Glovac, BO SSgt Joel D Estes

**91 AREFS, McConnell Crew E-113:** P Capt Roger D Johnson, CP Capt Montgomery L Clason, N 1Lt Daniel Million, BO Sgt Jeffrey A Wright

**528 BMS, Plattsburgh Crew E-22:** AC Maj David J Vivian, NB Maj Marvin L Chappell

**529 BMS, Plattsburgh Crew E-56:** AC Capt Larry D VanWinkle, NB Capt Karl B Young

**32 AREFS, Barksdale Crew:** IP Lt Col Jack O Foley, CP Capt Daniel P Ballard, FE MSgt Michael S Young, BO SMSgt Robert G Benamati

**71 AREFS, Barksdale Crew R-126:** IP Maj Troy E Minton, CP 1Lt Raphael J LaPorte, N 1Lt Steven J Hill, BO TSgt Melvin M Hitchcock

**62 BMS, Barksdale Crew E-21:** P Capt Russell V Lewey, CP 1Lt Clifford S Truxal, RN Capt Steven N Marin, NN 2Lt Steven G Shahabian, EW 1Lt Christopher D Dubois, AG A1C Shawn T Smith

**11 AREFS, Altus Crew R-116:** P Capt Casey L Henkel, CP Capt Ronald R Borthwick, N 1Lt Brian G Saucier, BO SSgt Alfred Billyzone Jr

**940 AREFG, Mather Crew:** IP Maj Michael R McLean, IP Capt Paul A Tullius, IN Capt Richard M Shuba, BO TSgt Steven B Hillebert

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